



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,973	04/13/2004	Robert B. Dianda	2329	3347
28004	7590	07/23/2007	EXAMINER	
SPRINT			PHAN, MAN U	
6391 SPRINT PARKWAY			ART UNIT	PAPER NUMBER
KSOPHT0101-Z2100			2616	
OVERLAND PARK, KS 66251-2100				
MAIL DATE		DELIVERY MODE		
07/23/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/822,973	DIANDA ET AL.	
	Examiner	Art Unit	
	Man Phan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 April 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5, 7-15, 17-20 is/are rejected.
- 7) Claim(s) 6 and 16 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

1. The application of Dianda et al. for the "ATM connection allocation in ATM networks" filed 04/13/2004 has been examined. Claims 1-20 are pending in the application.

2. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, assurance of proper use for Trademarks TM, and other legal symbols @, where required, and clarity of meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper antecedent basis for "the" and "said" within each claim). Minor typographical errors could render a Patent unenforceable and so the applicant is strongly encouraged to aid in this endeavor.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-5, 7-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al. (US#6,529,499) in view of Dziong et al. (US#6,697,369).

With respect to claims 11-13 and 20, the references disclose a novel system and method for measurement-based call admission control in a media gateway, according to the essential features of the claims. Doshi et al. (US#6,529,499) discloses in Fig. 1 a schematic diagram illustrating voice sessions between media gateways 250 interconnected through an IP network 205 (*packet network i.e., ATM network*). As voice packets are received at a media gateway (ingress packets) or exit the media gateway (egress packets), the particular session that a packet belongs to is identified for proper delivery and/or processing of the packet. A request for establishing a new voice-over-IP (VoIP) call for sending and receiving voice over IP packets in a media gateway is received. The request indicates a required bandwidth for the new call. Bandwidth utilization of at least one Internet protocol (IP) network interface for sending and receiving voice over IP packets in the media gateway is determined. The media gateway determines whether to admit the new VoIP call based on the determined required bandwidth for the new call and the determined bandwidth utilization for at least one of the IP network interfaces (Col. 1, lines 55 plus and Col. 3, lines 13 plus).

However, Doshi et al. does not disclose expressly the step of determine an overbooking factor for the link, and adjust the bandwidth for the ATM connection based (*packet network*) on the overbooking factor. In the same field of endeavor, Dziong et al. (US#6,697,369) teaches in the concept of aggregate effective bandwidth (AEBW) used to provide a useful approximation to required bandwidth for given levels and classes of network traffic. AEBW is used in deriving an allowed level of overbooking. An overbooking gain factor, $\alpha_{sup.t}$, is developed--typically in a network operations system--based on long-term measurements supplied periodically by network switches. This over-booking gain is derived from a count of cells arriving in periodic time slots and is updated from time to time based on measurement values sent from individual switches to the operations system. Presently disclosed embodiments provide tools that can be used for tuning call/traffic admission control and for network bandwidth management and dimensioning purposes in a variety of packet-switched networks (Col. 2, lines 27 plus). As shown in Fig. 7, an effective bandwidth adjustment is made in block 725. This adjustment, in turn is effected by the overbooking gain determined at a network operations system (OS) 760 in response to the cell count measurements and resulting estimation of the probability distribution function (PDF) for the effective bandwidth. The overbooking gain evaluator 740 is shown in Fig. 7 as receiving the maximum cell counts from block 730 at the switch as well as the (non-adjusted) effective bandwidth determined by connection admission control (CAC) model 710. In some embodiments, it proves valuable to include a safety model 750 in the OS determinations to modulate overbooking gain before application to effective bandwidth adjustment block 725. This safety model may be used to affect the overbooking gain by an operator input or by an

algorithmic reduction of overbooking by a constant amount or percentage (See also Fig. 4; Col. 10, lines 11 plus).

Regarding claims 14-15, It is to be noted that the term "*telephone call*" is to be construed as meaning any calls conventionally made via telephone lines such as, for example, voice calls, fax calls and modem calls. The voice-band services are typically carried on circuit-switched channels, and this connection typically supported voice-band services, such as voice calls, fax calls, and voice-band modem calls. Furthermore, In an ATM communications, data transmitted via the VoAAL2 technology typically interfaces with a customer's equipment that uses the DS1 format. DS1 is a signal format that comprises up to 24 individual circuits called DS0s. Each DS0 uses 64 kilobits per second of bandwidth and typically contains a voice call, a fax call, or other voice-band data such as a computer modem call.

Regarding claim 18, the available bandwidth of voice encoding techniques are commonly used in packetized voice transmissions, such as compression and silence suppression technologies are well known in the art.

Regarding claim 19, with many different client and network protocols, such as the link interfaces (in increasing bit transfer rates) DS-1/E1, DS-3/E3, 10/100Base-T, OC-3/STM-1 to OC-12/STM-4, Gigabit Ethernet, OC-48/STM-16 are well known in the art.

With respect to claims 1-5, 8-10, they are method claims corresponding to the apparatus claims as discussed in paragraph above. Therefore, claims 1-5, 7-10 are analyzed and rejected as previously discussed with respect to claims above.

One skilled in the art of communications would recognize the need for efficiently providing a method and system for allocating ATM connections in packetized network, and

would apply Dziong's novel use of overbooking factor for effective bandwidth adjustment and admission control in data networks into Doshi's system and method for call admission control in a media gateway. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Dziong's admission control adjustment in data networks using maximum cell count into Doshi's method for providing QoS for delay sensitive traffic over IP networks with the motivation being to provide a system and method for allocating ATM connections in ATM networks.

6. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al. (US#6,529,499) in view of Dziong et al. (US#6,697,369) and further in view of Miyamoto (US#7,120,114).

Regarding claim 17, Doshi et al. (US#6,529,499) and Dziong et al. (US#6,697,369) disclose the claimed limitations discussed in paragraph 5 above. However, this claim differs from the claims above in that the claim requires wherein the communication device is configured to subtracted the second bandwidth from an available bandwidth to get a new available bandwidth on the link. In the same field of endeavor, Miyamoto (US#7,120,114) provides a call admission control technique allowing flexible and reliable call admissions at an ATM switch in the case of an ATM network including both QoS-specified and QoS-unspecifed virtual connections is disclosed. In the case where a QoS (Quality of Service) specified connection request occurs, an estimated bandwidth is calculated which is to be assigned to an existing QoS-unspecifed traffic on the link associated with the QoS-specified connection request. A call control processor of the ATM switch determines whether the QoS-specified connection request

is accepted, depending on whether a requested bandwidth is smaller than an available bandwidth that is obtained by subtracting an assigned bandwidth and the estimated bandwidth from a full bandwidth of the link (Col. 1, lines 60 plus).

Regarding claim 7, it is a method claim corresponding to the apparatus claim 17 above. Therefore, claim 7 is analyzed and rejected as previously discussed with respect to claim 17.

One skilled in the art of communications would recognize the need for efficiently providing a method and system for allocating ATM connections in packetized network, and would apply Miyamoto's call admission control method and system for use in the ATM switch handling QoS, and Dziong's novel use of overbooking factor for effective bandwidth adjustment and admission control in data networks into Doshi's system and method for call admission control in a media gateway. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Miyamoto's call admission control method and system, and Dziong's admission control adjustment in data networks using maximum cell count into Doshi's method for providing QoS for delay sensitive traffic over IP networks with the motivation being to provide a system and method for allocating ATM connections in ATM networks.

Allowable Subject Matter

7. Claims 6 and 16 are objected to as being dependent upon the rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

8. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein adjusting the first bandwidth for the ATM connection based on the overbooking factor to determine a second bandwidth for the ATM connection comprises: dividing the first bandwidth for the ATM connection by the overbooking factor to determine the second bandwidth for the ATM connection, as specifically recited in the claims.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Karlsson (US#2006/0251050) is cited to show the call admission control in VoIP systems.

Yeom (US#7,236,483) is cited to show the method for controlling bandwidth in a VoIP system.

The McLampy et al. (US#7,151,781) is cited to show the system and method for providing session admission control.

The Feinberg (US#6,798,745) is cited to show the QoS management for voice over packet networks.

The Cheung et al. (US#6,515,964) is cited to show the method and apparatus for dynamically controlling the admission of calls to a network.

The Basso et al. (US#6,690,678) is cited to show the method and system in a packet switching network for dynamically adjusting the bandwidth of a continuous bit rate virtual path connection according to the network load.

The Miyamoto (US#2006/0285491) is cited to show the call admission control method and system.

The Rabie et al. (US#7,092,356) is cited to show the resource management in heterogenous QoS based packet networks.

The Dziong (US#6,625,155) cited how the model based admission control adjustment in data networks.

The Dziong (US#6,791,941) cited how the learning based admission control adjustment in data networks.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

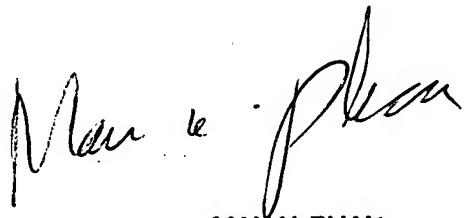
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Art Unit: 2616

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

07/18/2007.



MAN U. PHAN
PRIMARY EXAMINER